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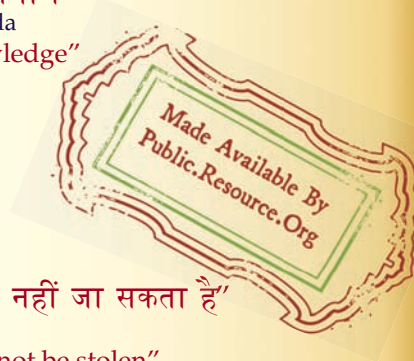
IS/IEC 61196-1-301 (2005): Coaxial Communication Cables
Part 1-301 Mechanical Test Methods - Test for Ovality [LITD
6: Wires, Cables, Waveguides and Accessories]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
समाक्ष संचार केबल
भाग 1-301 यांत्रिक परीक्षण विधियाँ — अंडाकारिता परीक्षण

Indian Standard
COAXIAL COMMUNICATION CABLES
PART 1-301 MECHANICAL TEST METHODS — TEST FOR OVALITY

ICS 33.120.10

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BUREAU OF INDIAN STANDARDS
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NATIONAL FOREWORD

This Indian Standard (Part 1-301) which is identical with IEC 61196-1-301 : 2005 'Coaxial communication cables – Part 1-301: Mechanical test methods – Test for ovality' issued by the International Electrotechnical Commission (IEC) was adopted by the Bureau of Indian Standards on the recommendation of the Wires, Cables, Waveguides and Accessories Sectional Committee and approval of the Electronics and Information Technology Division Council.

The text of IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appear to the following International Standard for which Indian Standard also exists. The corresponding Indian Standard which is to be substituted in its place is listed below along with its degree of equivalence for the edition indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
IEC 61196-1 : 2005 Coaxial communication cables — Part 1: Generic specification — General, definitions and requirements	IS/IEC 61196-1 : 2005 Coaxial communication cables: Part 1 Generic specification — General, definitions and requirements	Identical

Only English language text has been retained while adopting it in this Indian Standard and as such the page numbers given here are not the same as in the IEC Standard.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

COAXIAL COMMUNICATION CABLES

PART 1-301 MECHANICAL TEST METHODS — TEST FOR OVALITY

1 Scope

This part of IEC 61196 applies to coaxial communication cables. It specifies test methods for determining the ovality of dielectric, outer conductor(s) and overall jacket(s) or sheath(s) of coaxial cables.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61196-1, *Coaxial communication cables – Part 1: Generic specification – General, definitions and requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61196-1 apply.

4 Ovality test

4.1 Principle

The ovality is determined from the measurement of two orthogonal diameters of the cross-section of a sample taken from a completed cable.

4.2 Test equipment

Test equipment allowing a resolution of 0,01 mm and as defined below shall be used:

- a microscope with an estimated reading to three decimal digits;
- a profile projector with a magnification of at least 10;
- a caliper;
- a micrometer.

4.3 Preparation of test samples

Three samples shall be cut at least 100 mm apart from the finished cable. The ends of each cross section, as defined in the relevant sectional or detail specification, shall be cut squarely and carefully deburred.

4.4 Procedure

For each cross-section, two measurements shall be made of the overall diameter of the cable such that the diameters are perpendicular to each other.

In each case the selected position shall be where the two diameters, while remaining perpendicular to each other, give the maximum difference between them.

4.5 Expression of results

The ovality shall be calculated using the following formula:

$$O = \left(\frac{2(D_1 - D_2)}{D_1 + D_2} \right) \times 100 \quad (1)$$

where

D_1 is the larger measured value of diameter, in mm;

D_2 is the smaller measured value of diameter, in mm.

O is the ovality expressed as a percentage.

The ovality is defined as the mean ovality of the three test samples.

5 Test report

The test report shall give the following:

- D_1 , D_2 , ovality for each sample;
- mean ovality.

6 Requirement

The ovality shall be as specified in the relevant detail or sectional specification.

Bibliography

IEC 60050 (all parts), *International Electrotechnical Vocabulary (IEV)*

Bureau of Indian Standards

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Amendments Issued Since Publication

Amendment No.	Date of Issue	Text Affected

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